

Amendments to the Claims:

A listing of the entire set of pending claims (including amendments to the claims, if any) is submitted herewith per 37 CFR 1.121. This listing of claims will replace all prior versions, and listings, of claims in the Application.

Listing of Claims:

1. (Currently Amended) A method of preparing a polymer which comprises structural units of formula I,



in which formula:

- Ar is an aromatic cyclic system with 4 to 20 carbon atoms, which may be substituted with a substituent chosen from the group consisting of a non-branched C₁-C₂₀-alkyl, a C₃-C₂₀-alkoxy, a C₁-C₂₀-alkylsulfate, a branched C₃-C₂₀-alkyl, a phenyl group and a benzyl group and which may comprise up to 4 heteroatoms chosen from the group consisting of oxygen, sulfur and nitrogen in the aromatic cyclic system,
- t is equal to 0, 1 or 2,
- R₁ is chosen from the group consisting of a non-branched C₁-C₂₀-alkyl group, a branched C₃-C₂₀ alkyl group, a cyclic C₄-C₂₀-alkyl group, a C₁-C₄-alkyl-substituted cyclic C₄-C₂₀-alkyl group, a phenyl group and a benzyl group, which groups may comprise heteroatoms,
- R₂ and R''₂ are each chosen from the group consisting of a hydrogen atom, a C₁-C₂₀-alkyl group, and a C₄-C₂₀-aryl group, which groups may comprise substituents, characterized in that the method starts with a compound having the formula II



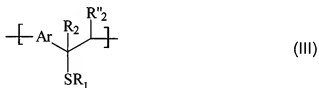
in which formula

R'_1 is chosen from the group consisting of a non-branched C_1 - C_{20} -alkyl group, a branched C_3 - C_{20} -alkyl group, a cyclic alkyl group, a C_1 - C_4 -alkyl-substituted cyclic alkyl group, a phenyl group, and a benzyl group, which groups may comprise heteroatoms,

R_1 , R_2 and Ar are equal to R_1 , R_2 and Ar in formula I, and

R'_2 is chosen from the group consisting of a hydrogen atom, a C_1 - C_{20} -alkyl group, an a C_4 - C_{20} -aryl group, which groups may comprise substituents,

and that the polymer with structural units of the formula I is prepared through polymerization with the aid of a base into a polymer which comprises units having the formula III



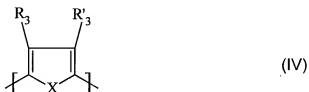
in which formula

R_1 , R_2 and Ar are equal to R_1 , R_2 and Ar in formula II, and

R'_2 is chosen from the group comprising R_2 and R'_2 ,

and for the preparation of the polymer with units having the formula I, in which formula t is equal to 1 or 2, through oxidation of at least a number of the units of the polymer having the formula III.

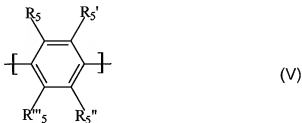
2. (Previously Presented) A method as claimed in claim 1, characterized in that the method starts with a compound having the formula II in which -Ar- is the unit having the formula IV



in which formula

- X is chosen from the group consisting of O, S, NR₆,
R₂ and R'₃ are chosen from the group consisting of a hydrogen atom, a chlorine atom, a bromine atom, a fluorine atom, and an iodine atom, a C₁-C₄-alkyl group, a carbonitril group, a trihalomethyl group, a hydroxy group, a nitro group, an amino group, a carboxyl group, a sulfoxyl group, a sulfonate group, a carbonate group, a substituted and non-substituted phenyl group, an alkylaryl group, an alkalkyl group, an alkoxy group, and a thioalkoxy group, and
R₆ is chosen from the group consisting of a hydrogen atom, a C₁-C₂₀-alkyl group, an aryl group, a C₁-C₂₀-alkylaryl group and an arylalkyl group.

3. (Previously Presented) A method as claimed in claim 1, characterized in that the method starts with a compound having the formula II in which -Ar- is the unit having the formula V



in which formula

R_5 , R'_5 , R''_5 and R'''_5 are chosen from the group consisting of a hydrogen atom, a chlorine atom, a bromine atom, a fluorine atom, an iodine atom, a C_1 - C_{22} -alkyl group, a carbonitril group, a trihalomethyl group, a hydroxy group, a nitro group, an amino group, a carboxyl group, a sulfoxyl group, a sulfonate group, a carbonitrate group, an optionally substituted phenyl group, a C_1 - C_{22} -alkylaryl group, a C_1 - C_{22} -arylalkyl group, a C_1 - C_{22} -alkoxy group, and a C_1 - C_{22} -thioalkoxy group.

4-7 (Canceled).

8. (Previously Presented) A composition of polymers with structural units having the formula IX:



Ar is an aromatic cyclic system with 4 to 20 carbon atoms, which may be substituted with a substituent chosen from the group consisting of a non-branched C₁-C₂₀-alkyl, group, a C₃-C₂₀-alkoxy group, a C₁-C₂₀-alkylsulfate group, a branched C₃-C₂₀-alkyl group, a phenyl group and a benzyl group and which may comprise up to 4 heteroatoms chosen from the group consisting of oxygen, sulfur and nitrogen in the aromatic cyclic system,

R₂ and R₂' are chosen from the group consisting of a hydrogen atom and C₁-C₂₀-alkyl and a C₄-C₂₀-aryl group, which groups may comprise substituents, and

Z is chosen from a group consisting of S(O)_pR₁, OR₂, in which p is equal to 0, 1 or 2, and R₁ and R₂ are chosen from the group comprising a non-branched C₁-C₂₀-alkyl group, a branched C₃-C₂₀ alkyl group, a cyclic C₄-C₂₀ alkyl group, a C₁-C₄-alkyl-substituted cyclic C₄-C₂₀-alkyl group, a phenyl group, and a benzyl group, which groups may contain heteroatoms,

wherein a first fraction of the composition comprises polymers with structural units having the formula IX with Z equal to S(O)_pR₁ and a chain length of 50 to 1000 units, and a second fraction of the composition comprises polymers with a chain length of more than 1000 units.

9-14 (Canceled).